Stantec

July 12, 2016
File: 193704553

Attention: Mr. Charles Lovell
USDA, APHIS, Wildlife Services
1201 Storbeck Drive
Waupun, WI 53963

Dear Mr. Lovell,

Reference: Big Hollow Wetland Mitigation Bank

Stantec Consulting Services Inc. (Stantec) is supporting CK Enterprises, LLC with the design and permitting of the proposed Big Hollow Wetland Mitigation Bank to be located in the Town of Spring Green, Sauk County, Wisconsin. On behalf of CK Enterprises we would like to address some of the comments and questions you expressed in your May 05, 2016 correspondence to Ms. Kerrie Hauser of the USACE regarding potential wildlife hazards for the Tri-County Regional Airport. As I mentioned to you during our telephone conversation, to date the project has been in the prospectus/conceptual phase of the permitting process and we are now beginning additional analysis to develop more specific design elements and address concerns. Also, we have scheduled a public open house in the Village of Spring Green on July 20, 2016 to provide project design and function information about the proposed mitigation bank and to receive feedback from local residents and business. The following is intended to provide you with additional information for evaluating the level of potential wildlife hazard risk to the Tri-County Regional Airport:

Project Objectives

The specific objective of the proposed wetland mitigation bank is to restore approximately 125 acres of emergent wetland and up to 30 acres of upland buffer (Attached Wetland Mitigation Bank Concept Layout Memo). Emergent wetland will consist primarily of wet prairie and sedge meadow communities with near surface soil saturation and periodic short-term shallow inundation. Upland buffers will consist of tallgrass mesic prairie. The wetland restoration will result in the enhancement of floral diversity, wildlife habitat, flood protection, and surface water and groundwater quality protection.

Operation

The wetland mitigation bank will be developed and operated in accordance with the *Guidelines for Wetland Compensatory Mitigation in Wisconsin*, and will be established through wetland restoration of an existing agricultural field. The general anticipated design concept will include minor grading of the site to create microtopography and no permanent standing water is expected.

Reference: **Big** Hollow Wetland Mitigation Bank

Need

Currently there is only one approved wetland mitigation bank within the Lower Wisconsin River BSA with minimal to no credit availability. In general, the Mississippi River Basin mitigation bank credit availability does not fulfill the credit needs of the State. In-lieu fee has been utilized extensively throughout the basin. Approval and development of the proposed bank will help to address some of the credit shortages.

Technical Feasibility

The site selected for this project is located within a geomorphic landscape position that is suitable for wetland restoration. The site has a history of a fluctuating high groundwater table and intermittent surface water flooding which have been studied and evaluated fairly extensively in the recent past in response to extreme flood events within the township. Ditch systems are currently maintained that minimize frequency, duration, and spatial extent of flooded or saturated conditions. The topography of the site is generally level with little topographic relief. Modifications to the existing drainage systems should result in hydroperiods sufficient to support targeted wetland plant communities.

Intermittent shallow scraping throughout the site to create microtopographic and hydrologic variations will favor development of diverse plant communities and habitat types. Selection of appropriate plant species and an aggressive adaptive management plan will promote native plant community development.

A well-qualified team of ecologists and water resource engineers experienced in wetland restoration will develop the detailed site design and management/monitoring plan. The selected design team has a history with the existing site and is knowledgeable of the historic and existing conditions as it relates to wetland restoration. The lead wetland ecologist for this project also lead the development of a successful wetland mitigation site in Trempealeau County using a similar approach that involved modifying and disabling the ditch system, shallow scraping to create microtopographic relief, customized seed and plant selection, and aggressive and adaptive management of the site. The water resource engineering team has supported the Township with past hydrological modeling efforts of this area in support of the flood relief evaluation and planning completed.

Ecological Suitability

The proposed site is identified by the Wisconsin Department of Natural Resources (WDNR) as "potentially restorable wetlands" that aligns well with the proposed restoration. WDNR wetland mitigation staff have completed site visits and indicated the sites suitability for wetland restoration to serve as a compensatory mitigation bank is favorable. The location of the proposed site provides a unique opportunity for development of a wetland mitigation bank that will result in substantial ecological benefits. The entire site is currently under agriculture use, specifically row

cropping and does not contain any natural habitat or vegetation outside of the existing ditch systems.

A wetland delineation of the site was completed in 2014 under the WDNR wetland delineation assurance program and further field reviewed and confirmed by WDNR wetland identification program staff. One small (1.1 acre), isolated farmed wetland was identified within the site, excluding the ditch system.

Soils mapped on the Property by the NRCS Soil Survey of Sauk County include Dakota loam (DaA), Gotham loamy sand (GoB), Pillot silt loam (PcA), Plainfield loamy sand (PfB, PfC), Sparta loamy sand (SpB), Sparta variant loamy sand (St), Toddville silt loam (TvA), and Watseka loamy sand (Wt). According to the NRCS List of Hydric Soils for Sauk County, the Watseka series may contain hydric inclusions. The Watseka soil series comprises the majority of the proposed wetland restoration area and is the basis of the WDNR mapped "potentially restorable wetland". In general, soils within this area consist of fine sand and loamy sand associated with the Wisconsin River valley. The Watseka series specifically consists of very deep, somewhat poorly drained soils formed in sandy deposits or outwash sediments. They are situated on outwash plains and stream terraces.

The site has been in agricultural row crop production for decades and generally is productive. In recent years (2008 primarily) the site was subjected to extensive flooding as a result of heavy rainfall, significant surface inflows from the up gradient bluffs and valleys, and a significantly elevated groundwater table. Surface and groundwater impacts were widespread in the area during that time and portions of the Village of Spring Green, just down gradient from the site, as well as the Town of Spring Green experienced historic flooding events. As a result of these events, a regional drainage ditch was constructed commencing in the southeast corner of the proposed Project Property, ultimately draining to the Wisconsin River due south of the site. Additionally, a stormwater detention basin was constructed in the northwest corner of the site to capture surface water runoff entering the site from the north and northwest. The construction and maintenance of both the regional drainage ditch and stormwater detention basin were carried out by the Town of Spring Green and Sauk County through easement agreements.

Wetland restoration of this specific site provides a unique opportunity to provide further flood protection and both groundwater and surface water quality protection that will be more ecologically beneficial than the existing drainage ditch system and current agricultural land use. By restoring wetland on the site, floodwater storage and groundwater infiltration will be increased, thereby slowing the release of direct agricultural surface water runoff into the regional ditch system which discharges into the lower Wisconsin River. The additional flood storage capacity provided by the restoration will further benefit and protect downstream flood prone property during heavy rainfall events while the increased residence time of surface water and groundwater stored on site during wet periods will allow for suspended solids to settle out prior to discharging downstream. Conversion of the site from agricultural row crop production to densely vegetated perennial wetland and prairie vegetation will lead to increased filtration of sediments and other pollutants and the uptake of excess nutrients prior to entering the Wisconsin River. The deeply rooted native

vegetation will protect on-site soil from further wind and water erosion and lead to increased filtration and recharge of groundwater. The proposed plant communities will consist of wet meadow, sedge meadow and mesic prairie.

Tri-County Regional Airport

Attached is a Project Overview Map that displays the location of the proposed wetland mitigation site in proximity to the Tri-County Regional Airport, as well as other existing natural landscape features (i.e. wetlands, waterways and nature preserves) with attributes that can attract wildlife that are potentially hazardous to airport operations. To put this into perspective compared to the existing wetlands within a 5 mile radius of the airport, the proposed wetland mitigation bank would add up to 1.6% additional wetland within this area. This is based on existing Wisconsin Wetland Inventory data within the 5 mile airport buffer (combined acreage = 7,847 ac.). In addition, The Nature Conservancy owns and manages property that supports migrating and breeding birds, and other wildlife within the 5 mile airport buffer (464 ac.).

According to information obtained from the *Wisconsin Bird Conservation Initiative - Wisconsin All Bird Conservation Plan* (http://www.wisconsinbirds.org/plan/habitats/list.htm) wet prairies support obligate wetland species such as Sora, Wilson's Snipe, and Marsh Wren where emergent vegetation persists. Tall, dense vegetation provides nesting habitat for priority grassland-obligate species such as Sedge Wren, Bobolink, Henslow's Sparrow, and Eastern Meadowlark; other more generalist species include Red-winged Blackbird, Common Yellowthroat, and Swamp Sparrow. Mallard and Blue-winged Teal also nest or forage in this prairie type, especially stands contiguous to open water habitats. However, in regard to the proposed Big Hollow Mitigation Bank no persistent open water habitat is proposed or currently available in the immediate vicinity. As shrub cover increases, Bell's Vireo, Willow Flycatcher, American Goldfinch, Song Sparrow, Yellow Warbler, and other species associated with woody cover may be present. Several grassland-obligate species formerly common in wet prairies are now largely extirpated due to widespread habitat destruction and fragmentation. In particular, area-sensitive species such as Northern Harrier and Greater Prairie-Chicken cannot sustain viable populations on the small, isolated wet prairie patches that remain (Hoffman and Sample 1988, Sample and Mossman 1997, WDNR 2005, Cutright et al. 2006). This species assemblage is primarily comprised of relatively small songbirds and would not be expected to significantly increase wildlife hazards for the airport.

The overview map also indicates that agricultural crops are produced immediately adjacent to aircraft movement areas. We assume this land use activity has been evaluated by a wildlife damage management biologist and is in compliance with OFZ and RVZ requirements as specified in AC 150/5300-13. I have queried the FAA Wildlife Strike Database to determine if there is a history or ongoing issues/hazards with wildlife in the vicinity of this airport; however, the Tri-County Airport (LNR) isn't listed in their system. I don't know if this is the result of no reported wildlife strikes or if there is some other reason.

Reference: **Big** Hollow Wetland Mitigation Bank

Based on the information provided above and attached, would it be possible for you to provide us with your opinion of the project as a hazardous wildlife attractant and concerns it might pose for the airport prior to our public open house scheduled for July 20, 2016, and/or direct us to additional analysis we should complete to determine airport wildlife hazard risks. Also, upon your evaluation, would you recommend we notify the appropriate FAA Regional Airports Division Office of the proposed land use change?

Please contact me if you have questions or require additional information regarding this wetland mitigation bank project.

Kind Regards,

Stantec Consulting Services Inc.

William Poole

William Poole
Senior Environmental Project Manager

Phone: 608-839-2008
Fax: 608-839-1995
Bill.poole@stantec.com

Attachment: Project Overview Map
Concept Plan

c. Kerrie Hauser - USACE
Dale Clark – CK Enterprises, LLC
Jeff Kraemer - Stantec

Figure No.
2

DRAFT

Title
Tri County Regional Airport Overview

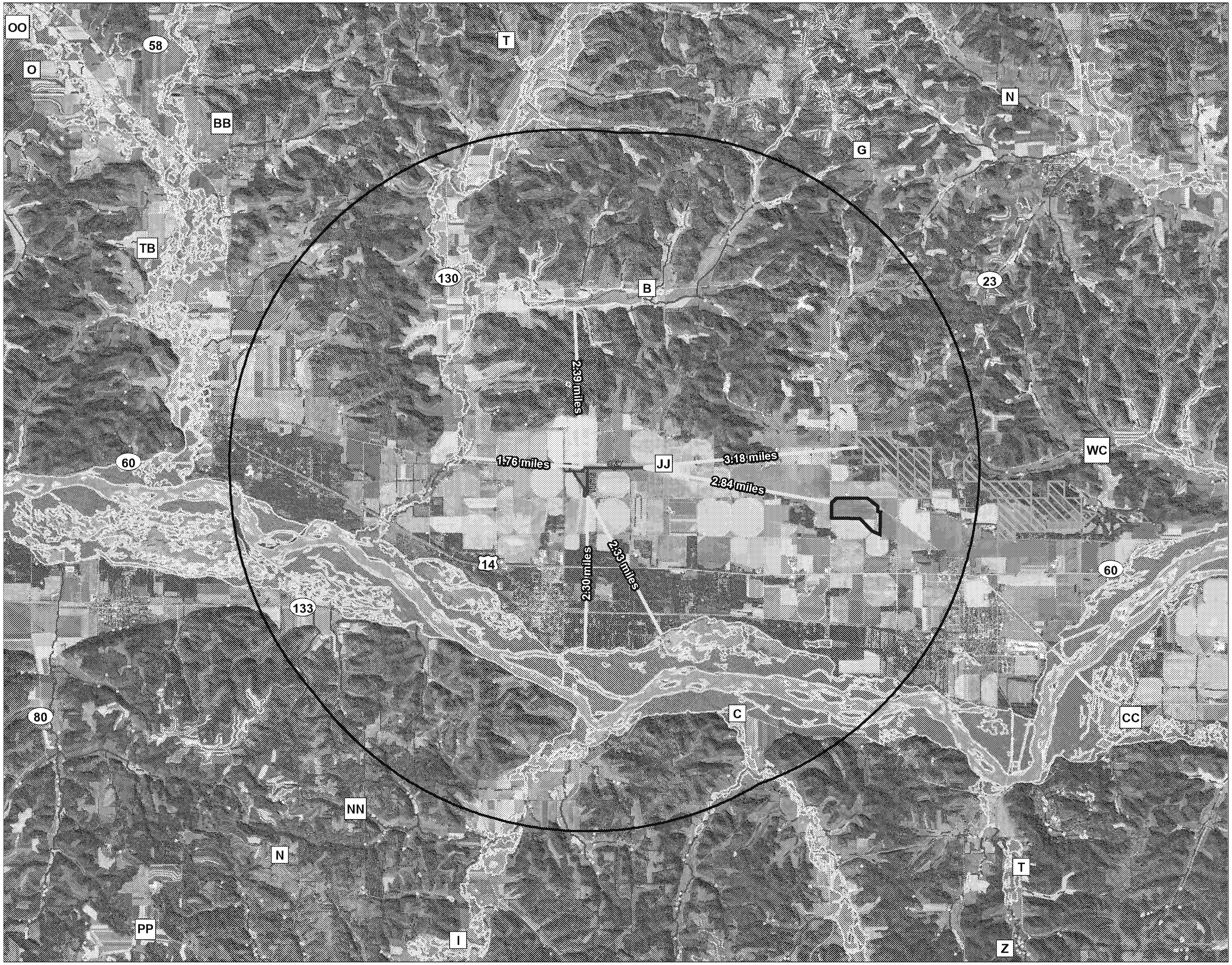
Client/Project
Dale Clark
Big Hollow Wetland Mitigation

Project Location
T8N, R3E, S2
T. of Spring Green, Sauk Co., WI

193704553
Prepared by BM on 2016-06-28
Technical Review by XXX on 2016-XX-XX
Independent Review by XXX on 2016-XX-XX

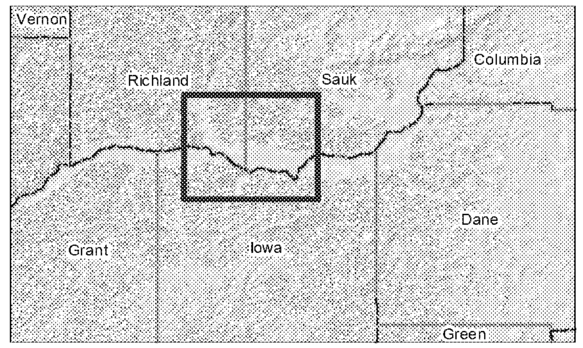
0 0.75 1.5 Miles
1:95,040 (At original document size of 11x17)

N



Legend
- Proposed Mitigation Bank
- Distance to Runway
- Airport Runway
- 5 Mile Buffer
- National Wetland Inventory
- TNC Boundary

DNR 24k Hydrography
- Perennial Stream
- Intermittent Stream
- Waterbody



Notes
1. Coordinate System: NAD 1983 StatePlane Wisconsin South FIPS 4803 Feet
2. Data Sources Include: Stantec, WDNR, PADUS, USFWS
3. Orthophotography: 2015 NAIP

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Memorandum

Montgomery Associates
Resource Solutions, LLC

To: Dale Clark

From: Steve Gaffield

Date: June 14, 2016

cc: Jeff Kraemer, Stantec

Re: Wetland mitigation bank concept layout

This memorandum summarizes the current conceptual wetland restoration design for the proposed mitigation bank on your property in the Town of Spring Green (see attached drawing dated June 14, 2016). This design was developed as supporting information for the mitigation bank prospectus you previously submitted to the Wisconsin Department of Natural Resources and the U.S. Army Corps of Engineers.

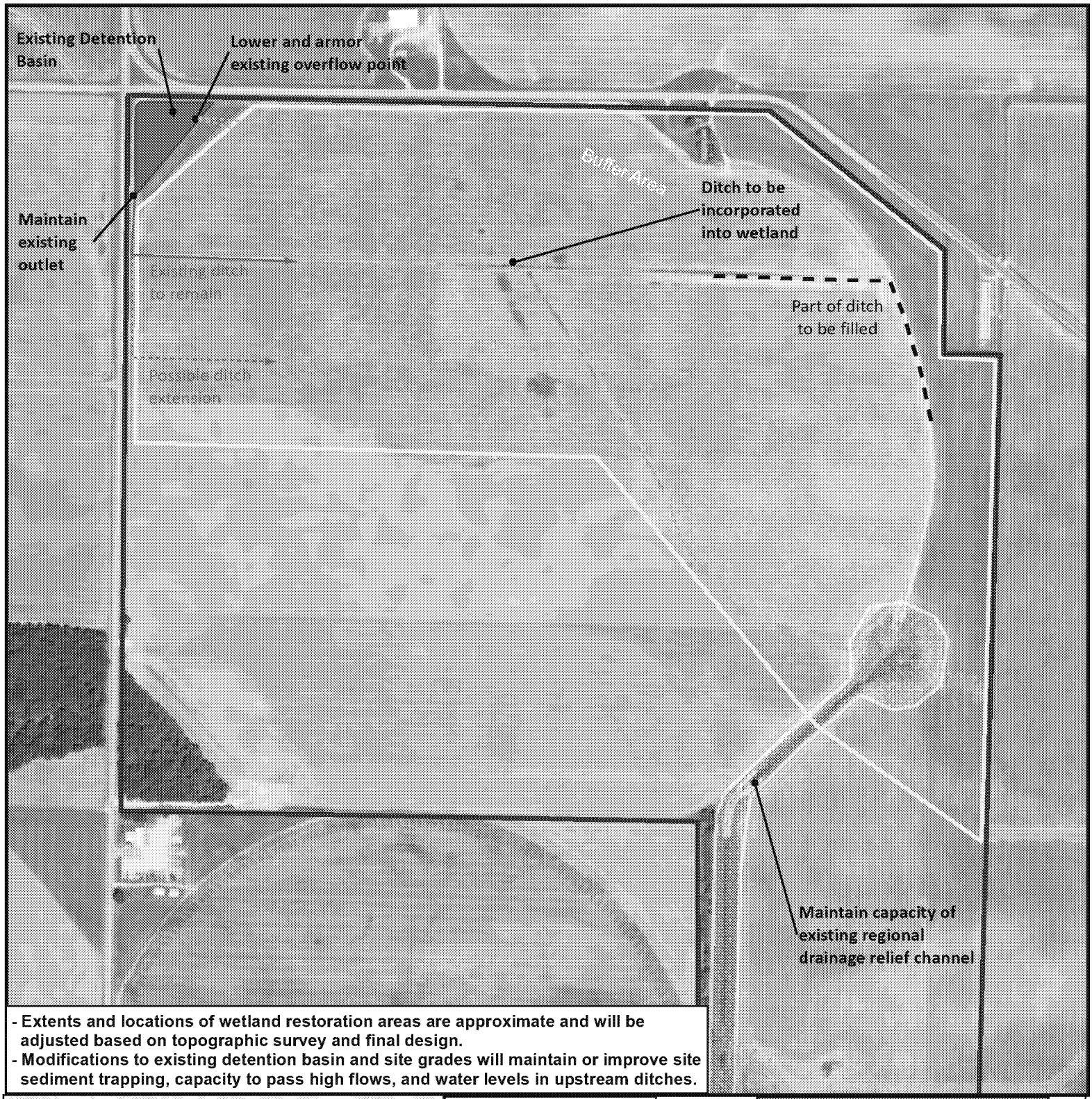
The wetland will include wet prairie and sedge meadow communities that have near surface soil saturation and periodic short-term inundation from surface flows entering the property from the northwest. Runoff will be spread across the relatively flat land surface, with some short-term detention in a series of interconnected low areas. These subtle depressions of approximately 6 – 12 inches will be located in existing low areas, with minor earthwork to enhance soil saturation and to maintain flood drainage through the property. After runoff events, the stored water will infiltrate into the sandy soil or be transferred to the air by evapotranspiration. No permanent open water habitat will be created.

The project will be designed to avoid offsite impacts. This includes maintaining the capacity to pass flood flows to the existing regional drainage relief ditch at the southeastern corner of the project and maintaining the sediment trapping performance at the site. The capacity of the existing regional drainage channel will be maintained, and the wetland layout will be designed to convey runoff to across the site to the regional ditch without affecting upstream water levels. This will be accomplished by replacing the single drainage swale that currently crosses the property with multiple, much wider flow paths through the wetland.

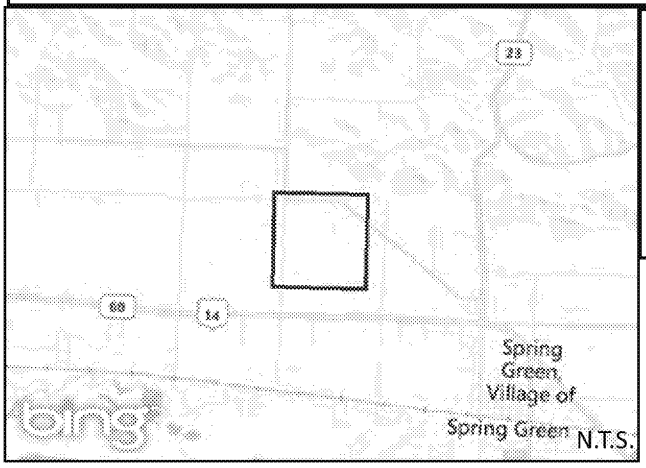
The site will be monitored to demonstrate that it meets the hydrologic criteria for wetland mitigation banks, and to confirm that off-site impacts do not occur.

Attachments: Mitigation bank concept drawing

119 South Main Street • Cottage Grove, WI 53527 ph 608.839.4422 fx 608.839.3322 • www.ma-rs.org



- Extents and locations of wetland restoration areas are approximate and will be adjusted based on topographic survey and final design.
- Modifications to existing detention basin and site grades will maintain or improve site sediment trapping, capacity to pass high flows, and water levels in upstream ditches.



N

Approx. Wetland Bank Boundary
Temporarily Inundated Soil
Parcel Boundary

0 150 300 600
Feet

Restoration Concept Overview

Big Hollow Proposed Wetland Mitigation Bank
Spring Green, WI

Montgomery Associates: Resource Solutions LLC
119 South Main St.
Cottage Grove, WI 53527
www.ma-rs.org
(608) 839-4422

Drawn by: DMW | 6/14/2016 | Coordinate System: Sauk County